



Active

- ☒ L2: (315) (discharge adj lamp) and ballast and ((voltage near2 (sens\$3 or detect\$3)) same input) and (voltage with (predetermined or determined or preselected or selected or set or preset or predefined or defined or threshold))
- ☒ L3: (159) 2 and (reduc\$4 near2 (power or volatge or current))
- ☒ L5: (77) 4 and protect\$3
- ☒ L4: (118) 2 and (reduc\$4 near2 power)
- ☒ L10: (100) 2 and (reduc\$4 near2 current)

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USPAT; US-PGPUB; EPO; JPO; DERWENT

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BRS term

ISR term

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1	BRS	L2	315	(discharge adj lamp) and ballast and ((voltage near2 (sens\$3 or detect\$3)) same input) and (voltage with (predetermined or determined or preselected or selected or set or preset or predefined or defined or threshold))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:35			0
2	BRS	L3	159	2 and (reduc\$4 near2 (power or volatge or current))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 14:30			0
3	BRS	L5	77	4 and protect\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 14:31			0
4	BRS	L4	118	2 and (reduc\$4 near2 power)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 14:02			0
5	BRS	L10	108	2 and (reduc\$4 near2 current)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:23			0
6	BRS	L11	72	10 and protect\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:22			0
7	BRS	L12	45	10 and diode and trigger	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:24			0
8	BRS	L13	36	12 and oscillat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:25			0
9	BRS	L14	36	13 and transistor	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:25			0
10	BRS	L15	17	14 and MOSFET	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:25			0
11	BRS	L17	13	14 and (SCR or (silicon adj controlled adj rectifier))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:32			0
12	BRS	L18	162	(discharge adj lamp) and ballast and ((voltage near2 (sens\$3 or detect\$3)) same input) and (voltage with (predetermined or determined or preselected or selected or set or preset or predefined or defined or threshold)) and inverter and transistor	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:39			0
13	BRS	L19	75	18 and delay	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:39			0
14	BRS	L21	15	20 and shut-off	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:40			0
15	BRS	L20	71	19 and capacitor and resistor	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/28 15:47			0

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3	US 20030111969 A1	20030619	17	Ballast for a discharge lamp	315/291
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6	US 20030001516 A1	20030102	38	Electronic ballast	315/224
7	US 20020074954 A1	20020620	16	Ballast with abnormal lamp sensor and method therefor	315/291
8	US 6459213 B1	20021001	37	Ballast for parallel-connected lamps	315/224
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27	US 5853572 A	19981229	21	Home water purification system	210/87
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29	US 5821700 A	19981013		Visual warning system for a railway vehicle	315/291
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43	US 5936357 A	19990810	9	Electronic ballast that manages switching frequencies for extrinsic purposes	315/247
44	US 5930126 A	19990727	12	Ballast shut-down circuit responsive to an unbalanced load condition in a single lamp ballast or in either lamp of a two-lamp ballast	363/37
45	US 5925990 A	19990720	13	Microprocessor controlled electronic ballast	315/307
46	US 5883473 A	19990316	17	Electronic Ballast with inverter protection circuit	315/225
47	US 5877681 A	19990302	27	System and method for broadcasting colored light for emergency signalling	340/471
48	US 5869935 A	19990209	13	Electronic ballast with inverter protection circuit	315/225
49	US 5864212 A	19990126	25	Control system for providing power to a gas discharge lamp	315/205
50	US 5856919 A	19990105	9	Quasiresonant boost power converter with bidirectional inductor current	363/101
51	US 5853572 A	19981229	21	Home water purification system	210/87
52	US 5841239 A	19981124	27	Circuit for dimming compact fluorescent lamps	315/219

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53	US 5838181 A	19981117	17	Pulse-width modulator circuit for use in low-cost power factor correction circuit	327/175
54	US 5834903 A	19981110	10	Double resonant driver ballast for gas lamps	315/219
55	US 5828178 A	19981027	23	High intensity discharge lamp color	315/151
56	US 5796216 A	19980818	21	Electronic ignition enhancing circuit having both fundamental and harmonic resonant circuits as well as a DC offset	315/307
57	US 5786671 A	19980728	10	Electronic ballast circuit having voltage reducing transformer	315/307
58	US 5770925 A	19980623	19	Electronic ballast with inverter protection and relamping circuits	315/225
59	US 5757630 A	19980526	20	Control circuit with improved functionality for non-linear and negative resistance loads	363/39
60	US 5751120 A	19980512	9	DC operated electronic ballast for fluorescent light	315/307
61	US 5742134 A	19980421	15	Inverter driving scheme	315/307
62	US 5737207 A	19980407	31	Power supply	363/132
63	US 5723951 A	19980303	9	Method of hot restarting a high intensity discharge lamp	315/174
64	US 5699238 A	19971216	29	Zero voltage switching controller of resonance mode converter and electronic ballast using the same	363/21.03
65	US 5698091 A	19971216	20	Home water purification system with filter end of life monitor	210/87
66	US 5696431 A	19971209	14	Inverter driving scheme for capacitive mode protection	315/308

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67	US 5691696 A	19971125	34	System and method for broadcasting colored light for emergency signals	340/471
68	US 5680017 A	19971021	12	Driving scheme for minimizing ignition flash	315/308
69	US 5677602 A	19971014	17	High efficiency electronic ballast for high intensity discharge lamps	315/224
70	US 5650925 A	19970722	18	Diode clamping arrangement for use in electronic ballasts	363/132
71	US 5636111 A	19970603	13	Ballast shut-down circuit responsive to an unbalanced load condition in a single lamp ballast or in either lamp of a two-lamp ballast	363/37
72	US 5568041 A	19961022	18	Low-cost power factor correction circuit and method for electronic ballasts	323/207
73	US 5546300 A	19960813	30	Zero voltage switching controller of resonance mode converter and electronic ballast using the same	363/132
74	US 5519289 A	19960521	17	Electronic ballast with lamp current correction circuit	315/224
75	US 5512801 A	19960430	34	Ballast for instant-start parallel-connected lamps	315/209R
76	US 5500792 A	19960319	26	Zero-voltage switching type electronic ballast for fluorescent lamp	363/98
77	US 5500576 A	19960319	12	Low height ballast for fluorescent lamps	315/307
78	US 5493180 A	19960220	12	Lamp protective, electronic ballast	315/91
79	US 5446342 A	19950829	10	Light-output-controlled fluorescent lighting fixture	315/129
80	US 5440475 A	19950808	8	Electronic Ballast with low harmonic distortion	363/45
81	US 5406471 A	19950411	12	AC-to-DC converter incorporating a chopper and charge-pump circuit combination	363/124
82	US 5402043 A	19950328	42	Controlled driven series-resonant ballast	315/307

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83	US 5394062 A	19950228	13	Lamp ballast circuit with overload detection and ballast operability indication features	315/129
84	US 5384516 A	19950124	36	Information processing apparatus including a control circuit for controlling a liquid crystal display illumination based on whether illumination power is being supplied from an AC power source or from a battery	315/160
85	US 5371439 A	19941206	9	Electronic ballast with lamp power regulation and brownout accommodation	315/209R
86	US 5317237 A	19940531	15	Low voltage ballast circuit for a high brightness discharge light source	315/307
87	US 5270620 A	19931214	12	High frequency resonant converter for operating metal halide lamps	315/291
88	US 5266869 A	19931130	22	Discharge lamp lighting apparatus having output impedance which limits current flow therethrough after start of discharging	315/170
89	US 5235254 A	19930810	12	Fluorescent lamp supply circuit	315/219
90	US 5225742 A	19930706	9	Solid state ballast for high intensity discharge lamps	315/307
91	US 5192897 A	19930309	11	Electronic high frequency controlled device for operating gas discharge lamps	315/308
92	US 5173643 A	19921222	26	Circuit for dimming compact fluorescent lamps	315/276

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93	US 5134345 A	19920728	6	Feedback system for stabilizing the arc discharge of a high intensity discharge lamp	315/248
94	US 5117161 A	19920526	6	Electronic ballast for gas discharge lamps	315/226
95	US 5030887 A	19910709	10	High frequency fluorescent lamp exciter	315/158
96	US 4958108 A	19900918	9	Universal fluorescent lamp ballast	315/307
97	US 4949018 A	19900814	14	High pressure sodium lamp starter controller	315/225
98	US 4873471 A	19891010	19	High frequency ballast for gaseous discharge lamps	315/308
99	US 4797599 A	19890110	16	Power control circuit with phase controlled signal input	315/194
100	US 4728866 A	19880301	29	Power control system	315/224
101	US 4684850 A	19870804	10	Variable frequency bridge inverter for driving gas discharge lamps	315/209R
102	US 4609849 A	19860902	7	High pressure sodium vapor lamp having D.C. resistive ballast circuits	315/200R
103	US 4523131 A	19850611	8	Dimmable electronic gas discharge lamp ballast	315/307

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104	US 4503364 A	19850305	20	Programming and control device for modified lead ballast for HID lamps	315/308
105	US 4482844 A	19841113	11	Lamp dimmer	315/194
106	US 4477748 A	19841016	15	Solid state ballast	315/306
107	US 4475065 A	19841002	13	Method of operating HID sodium lamp to minimize lamp voltage variation throughout lamp life	315/307
108	US 4414493 A	19831108	12	Light dimmer for solid state ballast	315/308
109	US 4409522 A	19831011	7	Direct current power source for an electric discharge lamp using reduced starting current	315/308
110	US 4398130 A	19830809	14	Arc lamp lighting unit with low and high light levels	315/226
111	US 4396872 A	19830802	16	Ballast circuit and method for optimizing the operation of high intensity discharge lamps in the growing of plants	315/308
112	US 4358717 A	19821109	11	Direct current power source for an electric discharge lamp	315/308
113	US 4350930 A	19820921	23	Lighting unit	315/49
114	US 3989976 A	19761102	9	Solid-state hid lamp dimmer	315/291

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115	US 3913002 A	19751014	15	Power circuits for obtaining a high power factor electronically	363/18
116	US 3833817 A	19740903	6	EMERGENCY LIGHTING SYSTEM	307/66
117	US 3628086 A	19711214	7	HIGH-FREQUENCY LAMP-OPERATING CIRCUIT	315/80
118	DE 4017415 C	19910116	13	Lighting circuit for high-pressure discharge lamp for vehicle - has control circuit, voltage detector and current detector constituting feedback system for DC voltage booster	

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1	US 20030117089 A1	20030626	27	Driving serially connected high intensity discharge lamps	315/312
2	US 20030117084 A1	20030626	17	Ballast with lamp sensor and method therefor	315/224
3	US 20030001516 A1	20030102	38	Electronic ballast	315/224
4	US 20020153849 A1	20021024	12	Electronic dimmable ballast for high intensity discharge lamp	315/247
5	US 20020074954 A1	20020620	16	Ballast with abnormal lamp sensor and method therefor	315/291
6	US 20020047601 A1	20020425	35	Method and apparatus for controlling a discharge lamp in a backlighted display	315/224
7	US 6459213 B1	20021001	37	Ballast for parallel-connected lamps	315/224
8	US 6351081 B1	20020226	8	Electronic ballast for high intensity discharge lamp	315/224
9	US 6316881 B1	20011113	34	Method and apparatus for controlling a discharge lamp in a backlighted display	315/219
10	US 6281642 B1	20010828	9	Ballast for a discharge lamp with false deactivation detection	315/308
11	US 6259215 B1	20010710	14	Electronic high intensity discharge ballast	315/307
12	US 6218787 B1	20010417	17	Remote dimming control system for a fluorescent ballast utilizing existing building wiring	315/194
13	US 6181084 B1	20010130	12	Ballast circuit for high intensity discharge lamps	315/291
14	US 6181079 B1	20010130	10	High power electronic ballast with an integrated magnetic component	315/247
15	US 6151232 A	20001121	25	Power supply circuit utilizing a piezoelectric transformer that supplies power to a load whose impedance varies depending on temperature	363/97
16	US 6114814 A	20000905	33	Apparatus for controlling a discharge lamp in a backlighted display	315/219
17	US 6081104 A	20000627	24	Method and apparatus for providing energy to a lighting system	323/268
18	US 6072710 A	20000606	7	Regulated self-oscillating resonant converter with current feedback	363/132
19	US 6057652 A	20000502	77	Power supply for supplying AC output power	315/307
20	US 6031749 A	20000229	21	Universal power module	363/98

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21	US 6011360 A	20000104	9	High efficiency dimmable cold cathode fluorescent lamp ballast	315/244
22	US 6008590 A	19991228	13	Integrated circuit inverter control having a multi-function pin	315/209R
23	US 5982110 A	19991109	15	Compact fluorescent lamp with overcurrent protection	315/247
24	US 5951145 A	19990914	36	Lighting apparatus	362/216
25	US 5930126 A	19990727	12	Ballast shut-down circuit responsive to an unbalanced load condition in a single lamp ballast or in either lamp of a two-lamp ballast	363/37
26	US 5925990 A	19990720	13	Microprocessor controlled electronic ballast	315/307
27	US 5883473 A	19990316	17	Electronic Ballast with inverter protection circuit	315/225
28	US 5877681 A	19990302	27	System and method for broadcasting colored light for emergency signalling	340/471
29	US 5869935 A	19990209		Electronic ballast with inverter protection circuit	315/225
30	US 5864212 A	19990126		Control system for providing power to a gas discharge lamp	315/205
31	US 5853572 A	19981229		Home water purification system	210/87
32	US 5841239 A	19981124		Circuit for dimming compact fluorescent lamps	315/219
33	US 5838181 A	19981117		Pulse-width modulator circuit for use in low-cost power factor correction circuit	327/175

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34	US 5834903 A	19981110		Double resonant driver ballast for gas lamps	315/219
35	US 5796216 A	19980818		Electronic ignition enhancing circuit having both fundamental and harmonic resonant circuits as well as a DC offset	315/307
36	US 5770925 A	19980623		Electronic ballast with inverter protection and relamping circuits	315/225
37	US 5751120 A	19980512		DC operated electronic ballast for fluorescent light	315/307
38	US 5742134 A	19980421		Inverter driving scheme	315/307
39	US 5699238 A	19971216		Zero voltage switching controller of resonance mode converter and electronic ballast using the same	363/21.03
40	US 5698091 A	19971216		Home water purification system with filter end of life monitor	210/87
41	US 5696431 A	19971209		Inverter driving scheme for capacitive mode protection	315/308
42	US 5691696 A	19971125		System and method for broadcasting colored light for emergency signals	340/471
43	US 5680017 A	19971021		Driving scheme for minimizing ignition flash	315/308
44	US 5677602 A	19971014		High efficiency electronic ballast for high intensity discharge lamps	315/224
45	US 5650925 A	19970722		Diode clamping arrangement for use in electronic ballasts	363/132
46	US 5636111 A	19970603		Ballast shut-down circuit responsive to an unbalanced load condition in a single lamp ballast or in either lamp of a two-lamp ballast	363/37
47	US 5568041 A	19961022		Low-cost power factor correction circuit and method for electronic ballasts	323/207
48	US 5546300 A	19960813		Zero voltage switching controller of resonance mode converter and electronic ballast using the same	363/132

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49	US 5519289 A	19960521		Electronic ballast with lamp current correction circuit	315/224
50	US 5512801 A	19960430		Ballast for instant-start parallel-connected lamps	315/209R
51	US 5500792 A	19960319		Zero-voltage switching type electronic ballast for fluorescent lamp	363/98
52	US 5500576 A	19960319		Low height ballast for fluorescent lamps	315/307
53	US 5493180 A	19960220		Lamp protective, electronic ballast	315/91
54	US 5440475 A	19950808		Electronic Ballast with low harmonic distortion	363/45
55	US 5406471 A	19950411		AC-to-DC converter incorporating a chopper and charge-pump circuit combination	363/124
56	US 5402043 A	19950328		Controlled driven series-resonant ballast	315/307
57	US 5394062 A	19950228		Lamp ballast circuit with overload detection and ballast operability indication features	315/129
58	US 5384516 A	19950124		Information processing apparatus including a control circuit for controlling a liquid crystal display illumination based on whether illumination power is being supplied from an AC power source or from a battery	315/160
59	US 5371439 A	19941206		Electronic ballast with lamp power regulation and brownout accommodation	315/209R
60	US 5317237 A	19940531		Low voltage ballast circuit for a high brightness discharge light source	315/307
61	US 5235254 A	19930810		Fluorescent lamp supply circuit	315/219

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62	US 5225742 A	19930706		Solid state ballast for high intensity discharge lamps	315/307
63	US 5192897 A	19930309		Electronic high frequency controlled device for operating gas discharge lamps	315/308
64	US 5173643 A	19921222		Circuit for dimming compact fluorescent lamps	315/276
65	US 5134345 A	19920728		Feedback system for stabilizing the arc discharge of a high intensity discharge lamp	315/248
66	US 5117161 A	19920526		Electronic ballast for gas discharge lamps	315/226
67	US 4873471 A	19891010		High frequency ballast for gaseous discharge lamps	315/308
68	US 4797599 A	19890110		Power control circuit with phase controlled signal input	315/194
69	US 4728866 A	19880301		Power control system	315/224
70	US 4684850 A	19870804		Variable frequency bridge inverter for driving gas discharge lamps	315/209R
71	US 4523131 A	19850611		Dimmable electronic gas discharge lamp ballast	315/307
72	US 4477748 A	19841016		Solid state ballast	315/306

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73	US 4398130 A	19830809		Arc lamp lighting unit with low and high light levels	315/226
74	US 4358717 A	19821109		Direct current power source for an electric discharge lamp	315/308
75	US 4350930 A	19820921		Lighting unit	315/49
76	US 3628086 A	19711214		HIGH-FREQUENCY LAMP-OPERATING CIRCUIT	315/80
77	DE 4017415 C	19910116		Lighting circuit for high-pressure discharge lamp for vehicle - has control circuit, voltage detector and current detector constituting feedback system for DC voltage booster	